

GGCAGGAGTCGGAGCCGGG

CGGAGGGAGGGGGAAAGAGGAGCGCAGGGTGAGAGTGAGCCGAGGCTTCGGGAGGCGAGGGGGGGGGGAGCAGC

GGCGAGGYCGCGCCTCCGCGCTCCGCGCCTAGGACTAGGGGGTGGGGGACGGACAAGCCCCCG ATG CCG GGG GAG

T E E P R P P E Q Q D Q E G E A A K A

ACG GAA GAG CCG AGA CCC CCG GAG CAG CAG GAC CAG GAA GGG GGA GAG GCG GCC AAG GCG

A P E E P Q Q R P P E A V A A P A G T

GCT CCG GAG GAG CCC CAA CAG CCC CCT GAG GCG GTC GCG GCG CCT GCA GGG ACC

T S S R V L R G G R D R G A A A A A

ACT AGC AGC CGC GTG CTG AGG GGA GGT CCG GAC CGA GGC CCG GCG GCG GCC GCG GCC GCG GCC

A A A V S R R R K A E Y P R R R S S P

GCC GCA GCT GTG TCC CGC CGG AGG AAG GCC GAG TAT CCC CGC CGG CGG AGG AGC AGC CCC

S A R P P D V P G Q Q P Q A A K S P S P

AGC GCC AGG CCT CCC GAC GTC CCC GGG CAG CAG CCC CAG GCG AAG TCC CCG TCT CCA

V Q G K K S P R L L C I E K V T T D K D

GTT CAG GGC AAG AAG AGT CCG CGA CTC CTA TGC ATA GAA AAA GTA ACA ACT GAT AAA GAT

P K E E K E E D S A L P Q E V S I A

CCC AAG GAA GAA AAA GAG GAA GAC GAT TCT GCC CTC CCT CAG GAA GTT TCC ATT GCT

FIG.1A

208020" T422900T

A S R P S R G W R S S R T S V S R H R D 164
GCA TCT AGA CCT AGC CGG GGC TGG CGT AGT AGT AGG ACA TCT GTT TCT CGC CAT CGT GAT 492

T E N T R S S R S K T G S L Q L I C K S 184
ACA GAG AAC ACC CGA AGC TCT CGG TCC AAG ACC GGT TCA TTG CAG CTC ATT TGC AAG TCA 552

E P N T D Q L D Y D V G E E H Q S P G G 204
GAA CCA AAT ACA GAC CAA CTT GAT TAT GAT GTT GGA GAA GAG CAT CAG TCT CCA GGT GGC 612

I S G E E E E E E E M L I S E E E I 224
ATT AGT GGT GAA GAG GAA GAG GAG GAA GAG ATG TTA ATC AGT GAA GAG GAG ATA 672

P F K D D P R D E T Y K P H L E R E T P 244
CCA TTC AAA GAT GAT CCA AGA GAT GAG ACC TAC AAA CCC CAC TTA GAA AGG GAA ACC CCA 732

K P R R K S G K V K E E K E K E I K V 264
AAG CCA CGG AGA AAA TCA GGG AAG GTA AAA GAA GAG AAG GAG AAG AAG GAA ATT AAA GTG 792

E V E V E V K E E E N E I R E D E E P P 284
GAA GTA GAG GTG GAG GTG AAA GAA GAG GAG AAT GAA ATT AGA GAG GAT GAG GAA CCT CCA 852

R K R G R R R K D D K S P R L P K R R K 304
AGG AAG AGA GGA AGA AGA CGA AAA GAT GAC AAA AGT CCA CGT TTA CCC AAA AGG AGA AAA 912

K P P I Q Y V R C E M E G C G T V L A H 324
AAG CCT CCA ATC CAG TAT GTC CGT TGT GAG ATG GAA GGA TGT GGA ACT GTC CTT GCC CAT 972

FIG.1B

P	R	Y	L	Q	H	H	I	K	Y	Q	H	L	L	K	K	K	Y	V	C	344
CCT	CGC	TAT	TTG	CAG	CAC	CAC	ATT	AAA	TAC	CAG	CAT	TTG	CTG	AAG	AAG	AAA	TAT	GTA	TGT	1032
P	H	P	S	C	G	R	L	F	R	L	Q	K	Q	L	L	R	H	A	K	364
CCC	CAT	CCC	TCC	TGT	GGA	CGA	CTC	TTC	AGG	CTT	CAG	AAG	CAA	CTT	CTG	CGA	CAT	GCC	AAA	1092
H	H	T	D	Q	R	D	Y	I	C	E	Y	C	A	R	A	F	K	S	S	384
CAT	CAT	ACA	GAT	CAA	AGG	GAT	TAT	ATC	TGT	GAA	TAT	TGT	GCT	CGG	GCC	TTC	AAG	AGT	TCC	1152
H	N	L	A	V	H	R	M	I	H	T	G	E	K	P	L	Q	C	E	I	404
CAC	AAT	CTG	GCA	GTG	CAC	CGG	ATG	ATT	CAC	ACT	GGC	GAG	AAG	CCA	TTA	CAA	TGT	GAG	ATC	1212
C	G	F	T	C	R	Q	K	A	S	L	N	W	H	M	K	K	H	D	A	424
TGT	GGA	TTT	ACT	TGT	CGA	CAA	AAG	GCA	TCT	CTT	AAT	TGG	CAC	ATG	AAG	AAA	CAT	GAT	GCA	1272
D	S	F	Y	Q	F	S	C	N	I	C	G	K	K	F	E	K	K	D	S	444
GAC	TCC	TTC	TAC	CAG	TTT	TCT	TGC	AAT	ATC	TGT	GGC	AAA	AAA	TTT	GAG	AAG	AAG	GAC	AGC	1332
V	V	A	H	K	A	K	S	H	P	E	V	L	I	A	E	A	L	A	A	464
GTA	GTG	GCA	CAC	AAG	GCA	AAA	AGC	CAC	CCT	GAG	GTG	CTG	ATT	GCA	GAA	GCT	CTG	GCT	GCC	1392
N	A	G	A	L	I	T	S	T	D	I	L	G	T	N	P	E	S	L	T	484
AAT	GCA	GGC	GCC	CTC	ATC	ACC	AGC	ACA	GAT	ATC	TTG	GGC	ACT	AAC	CCA	GAG	TCC	CTG	ACG	1452
Q	P	S	D	G	Q	G	L	P	L	L	P	E	P	L	G	N	S	T	S	504
CAG	CCT	TCA	GAT	GGT	CAG	GGT	CTT	CCT	CTT	CCT	GAG	CCC	TTG	GGA	AAC	TCA	ACC	TCT	TCT	1512

G E C L L L E A E G M S K S Y C S G T E 524
GGA GAG TGC CTA CTG TTA GAA GCT GAA GGG ATG TCA AAG TCA TAC TGC AGT GGG ACG GAA 1572

R V S L M A D G K I F V G S G S G G T 544
CGG GTG AGC CTG ATG GCT GAT GGG AAG ATC TTT GTG GGA AGC GGC AGC AGT GGA GGC ACT 1632

E G L V M N S D I L G A T T E V L I E D 564
GAA GGG CTG GTT ATG AAC TCA GAT ATA CTC GGT GCT ACC ACA GAG GTT CTG ATT GAA GAT 1692

S D S A G P * 570
TCA GAC TCT GCC GGA CCT TAG TGGACAGGAAGACTTGGGGCATGGGACAGCTCAGACTTTGTATTTAAAGT 1761

TAAAAGGACAAAAA

1791

FIG.1D

FIG. 2A

T A C L L L P G R L D C R L G P G A P A	142
ACC GCG TGC CTC CTG CTG CCC GGC CGC CTG GAC TGC AGG CTG GGC CCG GGC GCG CCC GCC	426
G A Q P A Q P P S S Y S L P L L L C K V	162
GGC GCG CAG CCT GCG CAG CCG CCC TCG TCC TAC TCG CTC CCC CTC CTG CTG TGC AAA GTG	486
F R W P D L R H S S E V K R L C C C E S	182
TTC AGG TGG CCG GAT CTC AGG CAT TCC TCG GAA GTC AAG AGG CTG TGT TGC TGT GAA TCT	546
Y G K I N P E L V C C N P H H L S R L C	202
TAC GGG AAG ATC AAC CCC GAG CTG GTG TGC TGC AAC CCC CAT CAC CTT AGC CGA CTC TGC	606
E L E S P P P P Y S R Y P M D F L K P T	222
GAA CTA GAG TCT CCC CCC CCT CCT TAC TCC AGA TAC CCG ATG GAT TTT CTC AAA CCA ACT	666
A D C P D A V P S S A E T G G T N Y L A	242
GCA GAC TGT CCA GAT GCT GTG CCT TCC TCC GCT GAA ACA GGG GGA ACG AAT TAT CTG GCC	726
P G G L S D S Q L L L L E P G D R S H W C	262
CCT GGG GGG CTT TCA GAT TCC CAA CTT CTT CTG GAG CCT GGG GAT CGG TCA CAC TGG TGC	786
V V A Y W E E K T R V G R L Y C V Q E P	282
GTG GTG GCA TAC TGG GAG GAG AAG ACG AGA GTG GGG AGG CTC TAC TGT GTC CAG GAG CCC	846
S L D I F Y D L P Q G N G F C L G Q L N	302
TCT CTG GAT ATC TTC TAT GAT CTA CCT CAG GGG AAT GGC TTT TGC CTC GGA CAG CTC AAT	906

FIG.2B

20200207 14:50:01

S D N K S Q L V Q K V R S K I G C G I Q 322
TCG GAC AAC AAG AGT CAG CTG GTG CAG AAG GTG CGG AGC AAA ATC GGC TGC GGC ATC CAG 966

L T R E V D G V W V Y N R S S Y P I F I 342
CTG ACG CGG GAG GTG GAT GGT GTG TGG GTG TAC AAC CGC AGC AGT TAC CCC ATC TTC ATC 1026

K S A T L D N P D S R T L L V H K V F P 362
AAG TCC GCC ACA CTG GAC AAC CCT GAC TCC AGG ACG CTG TTG GTA CAC AAG GTG TTC CCC 1086

G F S I K A F D Y E K A Y S L Q R P N D 382
GGT TTC TCC ATC AAG GCT TTC GAC TAC GAG AAG GCG TAC AGC CTG CAG CGG CCC AAT GAC 1146

H E F M Q Q P W T G F T V Q I S F V K G 402
CAC GAG TTT ATG CAG CAG CCG TGG ACG GGC TTT ACC GTG CAG ATC AGC TTT GTG AAG GGC 1206

W G Q C Y T R Q F I S S C P C W L E V I 422
TGG GGT CAG TGC TAC ACC CGC CAG TTC ATC AGC AGC TGC CCG TGC TGG CTA GAG GTC ATC 1266

F N S R * 426
TTC AAC AGC CGG TAG CCGGTGCGGAGGGGACAGAGCGTGAGCTGAGCAGGCCACACTTCAAACACTTTTGCT 1278

GCTAATATTTTCCTCCTGAGTGCTTTTCATGCAAACTCTTGGTCTTTTTTTTTTTTGTGTGGTGGTTTTCT
TCTTCTCGTCTCGTTTGTGTTCTGTTTGTTCGCTCTTTGAGAAATAGCTTATGAAAAGAAATTGTGGGGTTTTTT
TGGAAGAAGGGGCAGGTATGATCGGCAGGACACCCTGATAGGAAGAGGGGAAGCAGAAATCCAAGCACCCACCAACACACA

FIG. 2C

203020" 1443001

GTGTATGAAGGGGGGGTCAATTCATTGTCAGGAGTGTGTGAGTGTGAGTGTGCGGCTGTGTGTGCACGGGT
GTGCAGGAGCGGCAGATGGGGAGACAACGTGCTCTTTGTTTGTGTCTCTTATGGATGTCCCCAGCAGAGAGGTTTGCA
GTCCCAAGCGGTGTCTCTCTGCCCTTGGACACGCTCAGTGGGGCAGAGGCAGTACCTGGGCAAGCTGGCGGCTGGGG
TCCCAGCAGCTGCCAGGAGCAGGGCTCTGTCCCCAGCTGGGAAAGCCCTGCCCTCCTCTCCCTCATCAAGGACACG
GGCCTGTCCACAGGCTTCTGAGCAGCGAGCCTGCTAGTGGCCGACCAAGAACCAATATTTTCATCCTTGCTTATTCC
CTTCCTGCCAGCCCCCTGCCATTGTAGGCTCTTCTTTTTTGGCCATCTGCTCCTGGATCTCCCTGAGATGGGCTTCCCA
AGGGCTGCCGGGGCAGCCCCCTCACAGTATTGCTCACCAGTGCCCTCTCCCCTCAGCCTCTCCCCTGCCCTGGT
GACATCAGGTTTTTCCGGACTTAGAAAAACCAGCTCAGCACTGCCTGCTCCCATCCTGTGTGTTAAGCTCTGCTATTAG
GCCAGCAAGCGGGATGTCCCTGGGAGGGACATGCTTAGCAGTCCCCCTCCCTCCAAGAAGGATTTGGTCCGTCATAAC
CCAAGGTACCATCCTAGGCTGACACCTAACTCTTCTTTCAATTTCTTCTACAACCTACACTCGTATGATACTTCGACA
CTGTTCTTAGCTCAATGAGCATGTTTAGACTTTAACATAAGCTATTTTTCTAACTACAAAGGTTTAAATGAACAAGAGA
AGCATTCTCATTTGGAAATTTAGCATTGTAGTGCTTTGAGAGAGAGAAAGGACTCCTGAAAAAAACCTGAGATTTATTAAA
GAAAAAATGTATTTTATGTATATAAATATATTATTACTTGTAATATATAAAGACGTTTTTATAAGCATCATTATTTA

FIG.2D

208020" 7445001

TGTATTGTGCAATGTGTATAACAAGAAAAATAAGAAAAGATGCACCTTTCCTTTAATAATAATGCAAAATAACAAATGC
CAAATTAAAAAAGATAAACACAAGATTGGTGTTTTTTCCTATGGGTGTTATCACCTAGCTGAATGTTTTCTAAAGGAG
TTTATGTTCCATTAAACGATTTTTTAAAAATGTACACTTGAAAAAATAAAAAAAAAA

FIG. 2E

2008020" T422900T

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GGCACGAGGTTGCCCTGGCGGAGCAGAGACAGGCCCTCGGGGTGGAGGTC
      M C N T P T Y C D L
TTTGGTTTCATAAGCCTGAGAGAGATTTTCTAAGAT ATG TGT AAC ACA CCA ACG TAC TGT GAC CTA
      10 30
G K A A K D V F N K G Y G F G M V K I D
GGA AAG GCT GCT AAG GAT GTC TTC AAC AAA GGA TAT GGC TTT GGC ATG GTC AAG ATA GAC
      30 90
L K T K S C S G V E F S T S G H A Y T D
CTG AAA ACC AAG TCT TGT AGT GGA GTG GAA TTT TCT ACT TCT GGT CAT GCT TAC ACT GAT
      50 150
T G K A S G N L E T K Y K V C N Y G L T
ACA GGG AAA GCA TCA GGC AAC CTA GAA ACC AAA TAT AAG GTC TGT AAC TAT GGA CTT ACC
      70 210
F T Q K W N T D N T L G T E I S W E N K
TTC ACC CAG AAA TGG AAC ACA GAC AAT ACT CTA GGG ACA GAA ATC TCT TGG GAG AAT AAG
      90 270
L A E G L K L T L D T I F V P N T G K K
TTG GCT GAA GGG TTG AAA CTG ACT CTT GAT ACC ATA TTT GTA CCG AAC ACA GGA AAG AAG
      110 330
S G K L K A S Y K R D C F S V G S N V D
AGT GGG AAA TTG AAG GCC TCC TAT AAA CGG GAT TGT TTT AGT GTT GGC AGT AAT GTT GAT
      130 390
I D F S G P T I Y G W A V L A F E G W L
ATA GAT TTT TCT GGA CCA ACC ATC TAT GGC TGG GCT GTG TTC GGC TTC GAA GGG TGG CTT
      150 450
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FIG.3A

FIG. 3B

20200207 14:50:07

ACAGGTAGCGTCATGTTAGAGGAGACGATCTGACCCACCAGTTTGTACATCAGGTCCTGCATGTCCCACACCATTTTT
TCATGACCTTGTAATATACTGGTCTCTGTGCTATAGTGAATCTTTGGTTTTGCATCATAGTAAAAATAAACCCCA
TCACATTTGGAACATAAAAAAAAAAAAAAAAAAAAA

FIG.3C

208020 "T42503"

T S L A L V L N L L Q I Q R N V T L F P 20
ACG AGC CTA GCC CTG GTG CTC AAC CTG CTG CAG ATC CAG AGG AAT GTC ACT CTC TTC CCC 60

E E V I A T I F S S A W V P P C C G T 40
GAG GAG GTG ATC GCC ACC ATC TTT TCC TCC GCC TGG TGG GTC CCT CCC TGC TGC GGG ACA 120

A A V V G L L Y P C I D S H L G E P H 60
GCA GCT GCT GTT GTT GGC CTA CTG TAC CCC TGT ATC GAC AGT CAC CTC GGA GAA CCC CAC 180

K F K R E W A S V M R C I A V F V G I N 80
AAA TTT AAG AGA GAA TGG GCC AGT GTC ATG CGC TGC ATA GCA GTT TTT GTT GGC ATT AAC 240

H A S A K L D F A N N V Q L S L T L A A 100
CAC GCC AGT GCT AAA TTG GAT TTT GCC AAT AAT GTC CAG CTG TCC TTG ACT TTA GCA GCC 300

L S L G L W W T F D R S R S G L G L G I 120
CTA TCT TTG GGC CTT TGG TGG ACA TTT GAT CGT TCC AGA AGT GGC CTT GGG CTG GGG ATC 360

T I A F L A T L I T Q F L V Y N G V Y Q 140
ACC ATA GCT TTT CTA GCT ACG CTG ATC ACG CAG TTT CTC GTG TAT AAT GGT GTC TAT CAG 420

Y T S P D F L Y I R S W L P C I F F S G 160
TAT ACA TCC CCA GAT TTC CTC TAT ATT CGT TCT TGG CTC CCT TGT ATA TTT TTC TCA GGA 480

G V T V G N I G R Q L A M G V P E K P H 180
GGC GTC ACG GTG GGG AAC ATA GGA CGA CAG TTA GCT ATG GGT GTT CCT GAA AAG CCC CAT 540

FIG.4A

S	D	*		182
AGT	GAT	TGA	GTCTTCAAAACCACCGATTCTGAGAGCAAGGAAGATTTTGGAGAAAAATCTGACTGTGGATTATGAC	546
AA	GA	TTATCTTTTCTTAAGTAATCTATTTAGATCGGGCTGACTGTACAAATGACTCCTGGAAAAAACTCTTCACCT		
AG	CT	AGAATAGGGAGGTGGAGAAATGATGACTTACCCTGAAGTCTTCCCTTGACTGCCCGCAGTGGGGCCTGCTCTGTGC		
CC	TG	GAGCATTCTGCCCAGGCTACGTGGGTTCAGGCAGGTGGCAGCTTCCCAAGTATTCGATTTCATTCATGTGATTAA		
AA	CA	AGTTGCCATATTTCAAAAAAAAAAAAAAAAAAAMCTCGAGACCACCCGCAGTTTGTGTCAAGTCCCAAGAGGT		
AG	GT	GATGGTGCTTAACAAACATGAAGTATGGTGAATAGGAATAATATTTATCCNAAAGATTTTTAAAAAATAGGGCT		
GT	GT	TTAAAAAAAAAAAAAAAAAAAAA		

FIG. 4B

203020" P44900T

M C H S R S C H P T M T I L Q A P T P A 20
ATG TGT CAC TCT CGC AGC TGC CAC CCG ACC ATG ACC ATC CTG CAG GCC CCG ACC CCG GCC 60

P S T I P G P R R G S G P E I F T F D P 40
CCC TCC ACC ATC CCG GGA CCC CCG CCG GGC TCC GGT CCT GAG ATC TTC ACC TTC GAC CCT 120

L P E P A A A P A G R P S A S R G H R K 60
CTC CCG GAG CCC GCA GCG GCC CCT GCC GGG CGC CCC AGC GCC TCT CGC GGG CAC CGA AAG 180

R S R R V L Y P R V V R R Q L P V E E P 80
CGC AGC CGC AGG GTT CTC TAC CCT CGA GTG CTC CGG CGC CAG CTG CCA GTC GAG GAA CCG 240

N P A K R L L F L L L T I V F C Q I L M 100
AAC CCA GCC AAA AGG CTT CTC TTT CTG CTG CTC ACC ATC GTC TTC TGC CAG ATC CTG ATG 300

A E E G V P A P L P P E D A P N A A S L 120
GCT GAA GAG GGT GTG CCG GCG CCC CTG CCT CCA GAG GAC GCC CCT AAC GCC GCA TCC CTG 360

A P T P V S P V L E P F N L T S E P S D 140
GCG CCC ACC CCT GTG TCC CCC GTC CTC GAG CCC TTT AAT CTG ACT TCG GAG CCC TCG GAC 420

Y A L D L S T F L Q Q H P A A F * 157
TAC GCT CTG GAC CTC AGC ACT TTC CTC CAG CAA CAC CCG GCC GGC TTC TAA 471

CTGTGACTCCCGCACTCCCCAAAAGAATCCGAAAACACAAAGAACACCGGCTACCTGGTGGCGGAGAGCGTA 550

FIG.5A

TCCCAACTGGGACTTCCGAGGCAACTTGAACCTCAGAACACTACAGCGGAGACGCCACCCGGTGCTTGAGGGGGACCG 629
 AGGCGCACAGAGACCGAGGGCGCATAGAGACCGAGGCACAGCCAGCTGGGGCTAGGCCCGGTGGGAAGGAGAGCGTCGT 708
 TAATTTATTTCTTATTGCTCCTAATTAATATTATATATGATTTATGTACGTCCTCCTAGGTGATGGAGATGTGTACGTA 787
 ATATTTATTTTAACTTATGCAAGGGTGTGAGATGTTCCCTCTGCTGTAAATGCAGGTCTCTTGGTATTTATTGAGCTTT 866
 GTGGGACTGGTGGAGCAGGACACCTGGAACTGCGGCAAAGTAGGAGAAGAAATGGGGAGGACTCGGGTGGGGGAGGAC 945
 GTCCCGGCTGGGATGAAGTCTGGTGGTGGTAAAGTTTAGGAGGTGACTGCATCCTCCAGCATCTCAACTCCGTCGTG 1024
 TCTACTGTGTGAGACTTCGGCGGACCATTAGGAATGAGATCCGTGAGATCCTTCCATCTTCTTGAAGTCGCCCTTAGGG 1103
 TGGCTGCGAGGTAGAGGGTTGGGGGTTGGTGGGCTGTACGGAGCGACTGTGAGATCGCCTAGTATGTTCTGTGAACA 1182
 CAAATAAAATTGATTTACTGTCAAAAAAAAAAAAAAACTCGAG 1228

FIG.5B

GAATTGGCACGAGMCAGGAGCTCCTTTWCTGCGTCTCCCATCATGGGGCTTAGGGTTGAGTCTTCA 68
GGTTCGGGGCAGGAAGGACGGGCACTCAGGAGCCCCCTCCCCATCCACAGCCCCTCTTTGGGAGGGGGAAACTTG 147
GCAACCCGGGAGGCATGTGGATCTTTTCCTAAGCAAGATGCTGAGCTGGAAGAATGGGGGTGAAGTAATGTCCCAA 226
CTGAAACTTTGCCAGGCACCTGGGAGAGGCTGTGAACCTCTTTCTGGCTTTAGAAATTTAGGTCTAGATCCCAAAAGGCTA 305
AGTACCCCTGGGGCTAACCCAGAGGCATGCCTGGGCTGAGCTGAACCTTCTGGTGCACTGGCCCCCTGGCTGACTGCTC 384
TTCTGCAGGAAGTTGGAGGAGATTCTCTGAAGTTGATTCTCAGGCTGGATGTCCAAAGGGGTTGGAGTTCTTGATGTCT 463
TTCTGTCCCTCTCTTTTCTCTCCCTACCAGGTCCACTTCTTTCAGAGGGGCCCTGCGGTGCTCTAAAGTTCTC 542
CTGTTAAAGTTTAGAGCAAATTGGTTATTTATTTAAATCAAATAAACTTTTAAAAGTACTAAGACAACCTTCTAAGAGG 621
GGAGTGGACAGAGGGCCTGGTGGCAGCTCACAGTTTCTTTTCTGACCTTTGGTCTCACCCACCAAGTGTCCACCTGAG 700
TGCCACCTTGCCACCTGAGGTAATGCCCTGGGGCTCCACCAGTCCAGATCCACAGGGCGCAGCCATGTGGGAGTGGC 779
GGCTGATTGTACCCAGTAGTGTGATAGCACATTATTATACAGCCCAAGAGAGGAAGCAACCCAAATGTCCATTAG 858
CTGATAAATGGATAAATGAAATATGGTACGTCCGAAGAATGGAATATCATTCACCCCTGAAAAAAGAACGAAGTCCAGCA 937
CCAAACGTGCTACAACATGGATGAACCTTCGATGACTTTGTGCCACATGAAAGAAGAGCCAGCCACAAAAGGCCATAT 1016

FIG. 6A

M	S	R	M	G	K	P	I	E	T	Q	K	S	P	P	16			
ATTGTATGAAATGAA	ATG	TCC	AGA	ATG	GGC	AAA	CCC	ATA	GAG	ACA	CAA	AAA	TCT	CCG	CCA	CCT	1079	
P	Y	S	R	L	S	P	R	D	E	Y	K	P	L	D	L	S	D	36
CCC	TAC	TCT	CGG	CTG	TCT	CCT	CGC	GAC	GAG	TAC	AAG	CCA	CTG	GAT	CTG	TCC	GAT	1139
L	S	Y	T	E	T	E	A	T	N	S	L	I	T	A	P	G	E	56
TTG	TCT	TAC	ACT	GAA	ACG	GAG	GCT	ACC	AAC	TCC	CTC	ATC	ACT	GCT	CCG	GGT	GAA	1199
D	A	S	M	S	P	D	A	T	K	P	S	H	W	C	S	V	A	76
GAC	GCC	AGC	ATG	TCT	CCG	GAC	GCC	ACC	AAG	CCG	AGC	CAC	TGG	TGC	AGC	GTG	GCG	1259
E	H	R	T	R	V	G	R	L	Y	A	V	Y	D	Q	A	V	S	96
GAG	CAC	CGG	ACG	CGC	GTG	GGC	CGC	CTC	TAT	GCG	GTG	TAC	GAC	CAG	GCC	GTC	AGC	1319
Y	D	L	P	Q	G	S	G	F	C	L	G	Q	L	N	L	E	Q	116
TAC	GAC	CTA	CCT	CAG	GGC	AGC	GGC	TTC	TGC	CTG	GGC	CAG	CTC	AAC	CTG	GAG	CAG	1379
E	S	V	R	R	T	R	S	K	I	G	F	G	I	L	L	S	K	136
GAG	TCG	GTG	CGG	CGA	ACG	CGC	AGC	AAG	ATC	GGC	TTC	GGC	ATC	CTG	CTC	AGC	AAG	1439
D	G	V	W	A	Y	N	R	G	E	H	P	I	F	V	N	S	P	156
GAC	GGC	GTG	TGG	GCC	TAC	AAC	CGC	GGC	GAG	CAC	CCC	ATC	TTC	GTC	AAC	TCC	CCG	1499
D	A	P	G	G	R	A	L	V	V	R	K	V	P	P	G	Y	S	176
GAC	GCG	CCC	GGC	GGC	CGC	GCC	CTG	GTC	GTG	CGC	AAG	GTG	CCC	CCC	GGC	TAC	TCC	1559

FIG.6B

V F D F E R S G L Q H A P E P D A A D G 196
 GTG TTC GAC TTC GAG CGC TCG GGC CTG CAG CAC GCG CCC GAG CCC GAC GCC GGC GAC GGC 1619

P Y D P N S V R I S F A K G W G P C Y S 216
 CCC TAC GAC CCC AAC AGC GTC CGC ATC AGC TTC GCC AAG GGC TGG GGC CCC TGC TAC TCC 1679

R Q F I T S C P C W L E I L L N N P R • 236
 CGG CAG TTC ATC ACC TCC TGC CCC TGC TGG CTG GAG ATC CTC AAC AAC CCC AGA TAG 1739

TGGCGCCCGCGGAGGGGGTGGAGGGCGGGCCGCCACCTGCCGGCCTCGAGAGGGCGGATGCCCAGA 1818

GACACAGCCCCCAGGACAAAACCCCCAGATATCATCTACCTAGATTTAATAATAAAGTTTTATATATTATGGAAT 1897

ATATATTACTTGTAATTATGGAGTCATTTTACAATGTAATTATTTATGTAATGGTGCAATGTGTATATGGACAAA 1976

ACAAAGAAAGACGCACCTTTGGCTTATAATTCTTCAATACAGATAATTTCTTCTCTCTCTCTCTCTCTCTCTTACT 2055

TTTTATATATATATAAAGAAAAATGATACAGCAGAGCTAGGTGGAAAAGCCTGGGTTTGGTGATGGTTTTTGAGATA 2134

TTAATGCCCAGACAAAAAGCTAATACCAGTCACTCGATAATAAAGTATTCGCATTATAGTTTTTTTAACTGCTTCT 2213

TTTTACAAAGAGGGGCAGGTAGGGCTTCAGCGGATTTCTGACCCATCSTGTACCTTGAAACTTGACCTCAGTTTCAAG 2292

TTTTACTTTTATTGGATAAAGACAGAACAAAATTGAAAAGGGAGGAAAGTCACATTTACTCTTAAGTAAACCAGAGAAAG 2371

FIG.6C

TTCTGTTGTTCCCTGCCCATGGCTATGGGGTGTCCAGTGGATAGGGATGGCGGTGGGGAAAAGGAGAATACACTGG 2450

CCATTTATCCTGGACAAGCTCTCCAGTCTGATGGAGGAGGTTTCATGCCCTAGCCTAGAAAGGCCCCAGGTCCATGACCC 2529

CCATCTTTGAGTTATGAGCAAGCTAAAAGAAGACACTATTTCTCACCATTTTGTGGAATGGCCTGGGGAAACAAGACT 2608

GAAATGGGCCTTGAGCCCCACCTGCTACCTTGCAGAGAACCATCTCGAGCCCCGTAGATCTTTTAGGACCTCCACACGGC 2687

TATTTCCACCCCCAGCCCAAAAATAGCTCAGAATCTGCCCCATCCAGGGCTGTATTAAATGATTTATGTAAAAGGCAGATG 2766

GTTTATTTCTACTTTGTAAAAGGGAAAAGTTGAGGTTCTGGAAGGATAAATGATTTGCTCATGAGACAAAAATCAAGGTT 2845

AGAAAGTTACATGGAATTGTAGGACCAGAGCCATATCATTAGATCAGCTTTCTGAAGAATATTCTCMAAAAAAGAAAAGTC 2924

TCCTTGGCCAGATAACTAAGAGGAATGTTTCATTGTATATCTTTTCTTGGAGATTATATTAAACATATTAAAGTGCTC 3003

TGAGAAGTCCTGTGTATTATCTCTTGCTGCATAATAAATTATCCCCAAACTTAAAAAATAAAAAAAAAAAAAAACTCGA 3082

G 3083

FIG. 6D

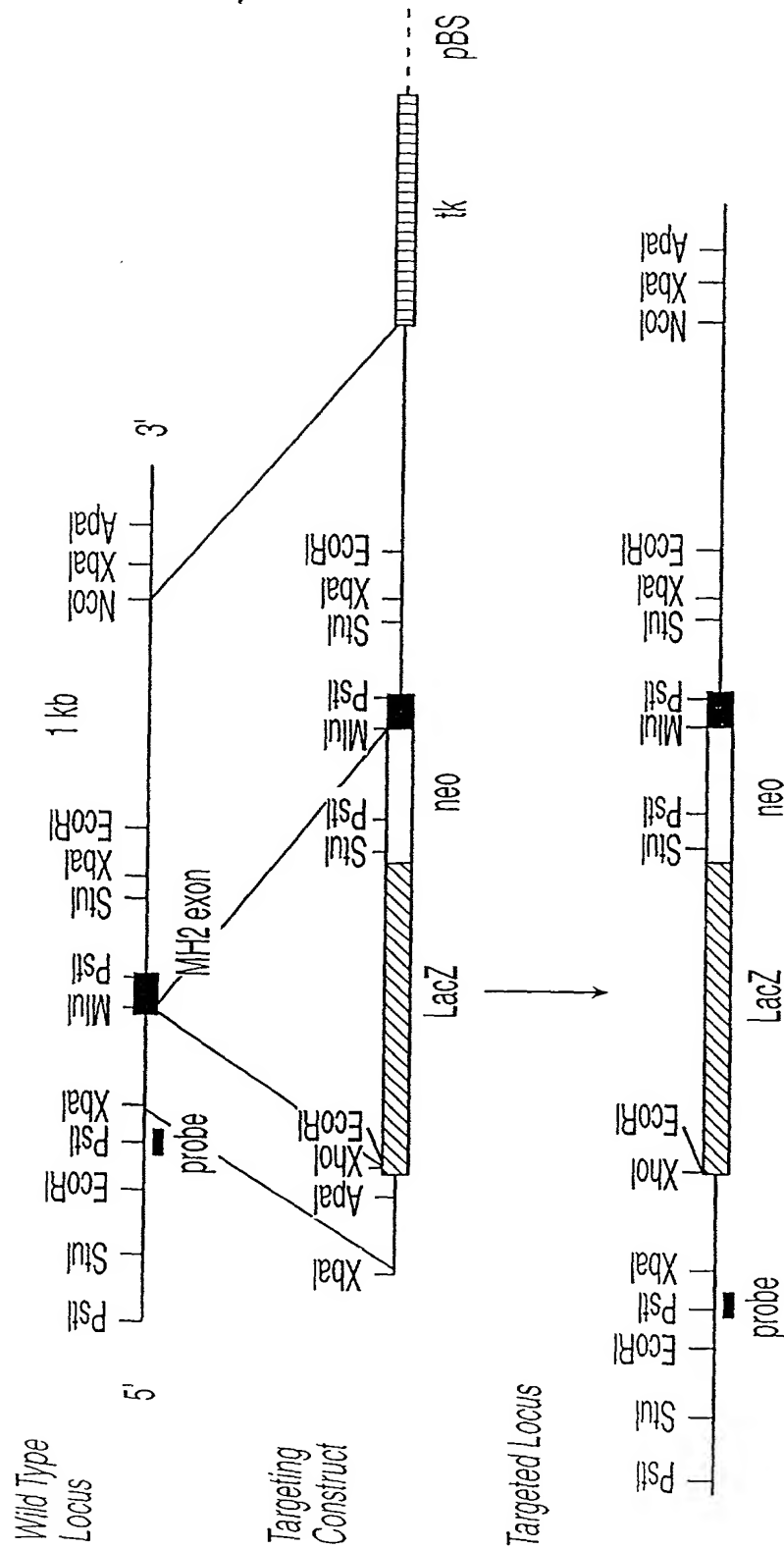


FIG. 7A

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FIG. 7B



FIG. 7C

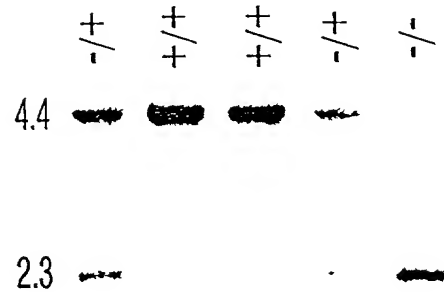
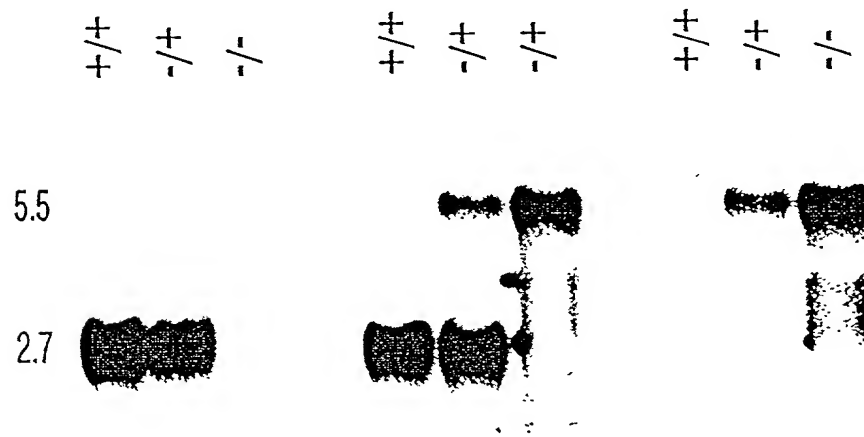
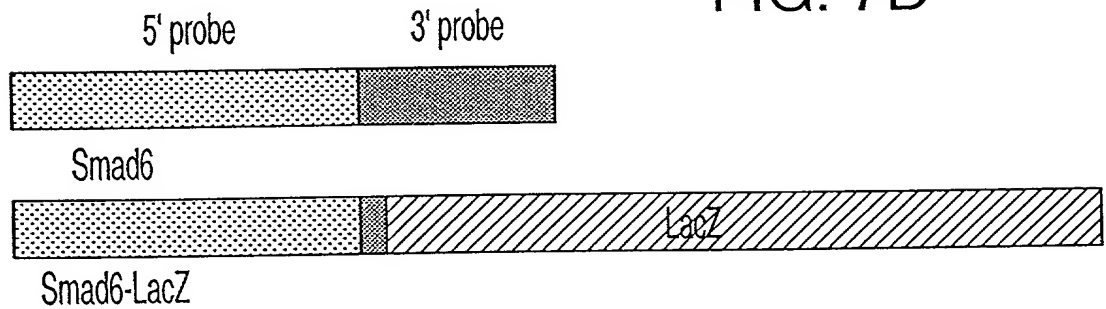


FIG. 7D



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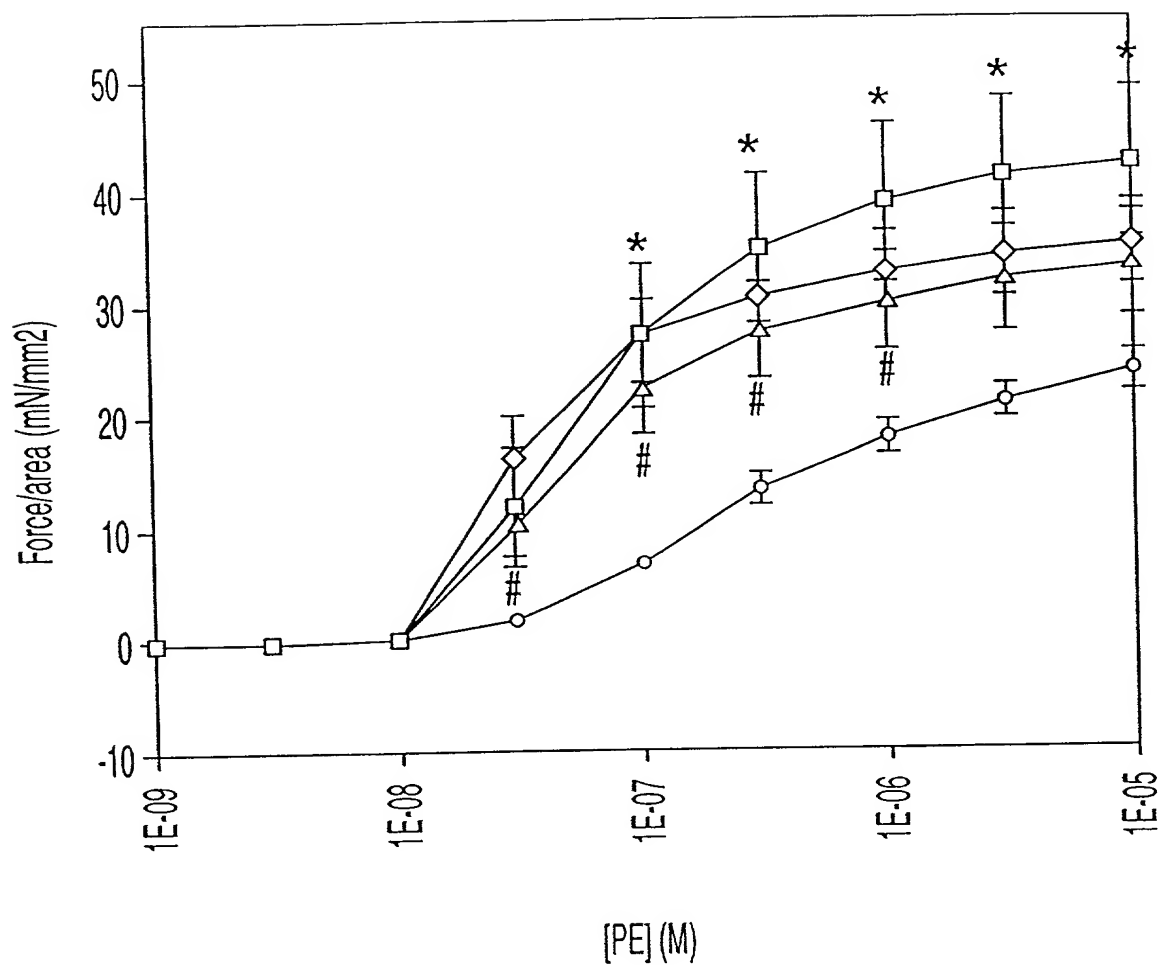


FIG. 8

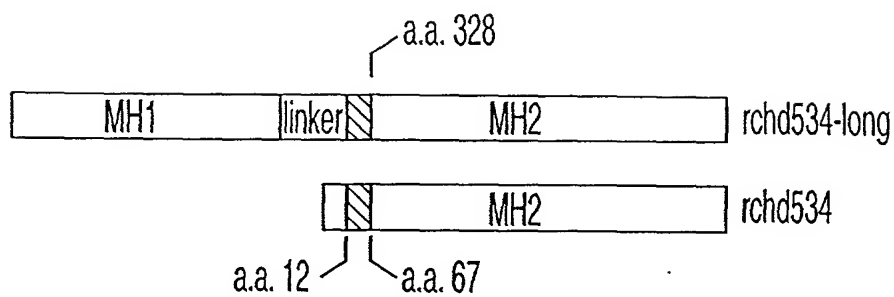


FIG. 9

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ACGAGGACGACAGGCTGTGCGCGGTCTGCACGGCGCTCCGCGGCGGAGCTTCATGTGGGGCTGCGACCCGCGCAGCCGG 79

CCCCTCGCTGAGGGAACGGACCCCCGGTAACCGGAGACCGCCTTCCCCCCCACCCCTGGCGCCAAAGGATATCGT M 1
ATG 157

F R S K R S G L V R R L W R S R V V P D 21
TTC AGG TCC AAA CGC TCG GGG CTG GTG CGG CGA CTT TGG CGA AGT CGT GTG GTC CCC GAC 217

R E E G G S G G G G G G D E D G S L G S 41
CGG GAG GAA GGC GCC AGC GGC GGC GGC GGT GGC GGC GAC GAG GAT GGG AGC TTG GGC AGC 277

R A E P A P R A R E G G G C G R S E V R 61
CGA GCT GAG CCG GCC CCG CGG GCA AGA GAG GGC GGA GGC TGC GGC CGC TCC GAA GTC CGC 337

P V A P R R P R D A V G Q R G A Q G A G 81
CCG GTA GCC CCG CGG CGG CCC CGG GAC GCA GTG GGA CAG CGA GGC GCC CAG GGC CCG GGG 397

R R R R A G G P P R P M S E P G A G A G 101
AGG CGC CGG CGC GCA GGG GGC CCC CCG AGG CCC ATG TCG GAG CCA GGG GCC GGC GCT GGG 457

S S L L D V A E P G G P G W L P E S D C 121
AGC TCC CTG CTG GAC GTG GCG GAG CCG GGA GGC CCG GGC TGG CTG CCC GAG AGT GAC TGC 517

E T V T C C L F S E R D A A G A P R D A 141
GAG ACG GTG ACC TGC TGT CTC TTT TCG GAG CGG GAC GCC GCC GGC GCG CCC CGG GAC GCC 577

S D P L A G A A L E P A G G G R S R E A 161
AGC GAC CCC CTG GCC GGG GCG GCC CTG GAG CCG GCG GGC GGC GGG CGG AGT CGC GAA GCG 637

R S R L L L L E Q E L K T V T Y S L L K 181
CGC TCG CGG CTG CTG CTG CTG GAG CAG GAA CTC AAA ACC GTC ACG TAC TCG CTG CTG AAG 697

R L K E R S L D T L L E A V E S R G G V 201
CGG CTC AAG GAG CGC TCG CTG GAC ACG CTG CTG GAG GCG GTG GAG TCC CGC GGC GGC GTG 757

P G G C V L V P R A D L R L G G Q P A P 221
CCG GGC GGC TGC GTG CTG GTG CCG CGC GCC GAC CTC CGC CTG GGC GGC CAG CCC GCG CCG 817

P Q L L L G R L F R W P D L Q H A V E L 241
CCG CAG CTG CTG CTC GGC CGC CTC TTT CGC TGG CCC GAC CTG CAG CAC GCC GTG GAG CTG 877

K P L C G C H S F A A A A D G P T V C C 261
AAG CCC CTG TGC GGC TGC CAC AGC TTC GCC GCC GCC GCC GAC GGC CCT ACC GTG TGC TGC 937

N P Y H F S R L C G P E S P P P P Y S R 281
AAC CCC TAC CAC TTC AGC CGG CTC TGC GGG CCC GAA TCT CCG CCA CCT CCC TAC TCT CGG 997

L S P R D E Y K P L D L S D S T L S Y T 301
CTG TCT CCT CGC GAC GAG TAC AAG CCA CTG GAT CTG TCC GAT TCC ACA TTG TCT TAC ACT 1057

FIG.10A

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E T E A T N S L I T A P G E F S D A S M 321
GAA ACG GAG GCT ACC AAC TCC CTC ATC ACT GCT CCG GGT GAA TTC TCA GAC GCC AGC ATG 1117

S P D A T K P S H W C S V A Y W E H R T 341
TCT CCG GAC GCC ACC AAG CCG AGC CAC TGG TGC AGC GTG GCG TAC TGG GAG CAC CGG ACG 1177

R V G R L Y A V Y D Q A V S I F Y D L P 361
CGC GTG GGC CGC CTC TAT GCG GTG TAC GAC CAG GCC GTC AGC ATC TTC TAC GAC CTA CCT 1237

Q G S G F C L G Q L N L E Q R S E S V R 381
CAG GGC AGC GGC TTC TGC CTG GGC CAG CTC AAC CTG GAG CAG CGC AGC GAG TCG GTG CGG 1297

R T R S K I G F G I L L S K E P D G V W 401
CGA ACG CGC AGC AAG ATC GGC TTC GGC ATC CTG CTC AGC AAG GAG CCC GAC GGC GTG TGG 1357

A Y N R G E H P I F V N S P T L D A P G 421
GCC TAC AAC CGC GGC GAG CAC CCC ATC TTC GTC AAC TCC CCG ACG CTG GAC GCG CCC GGC 1417

G R A L V V R K V P P G Y S I K V F D F 441
GGC CGC GCC CTG GTC GTG CGC AAG GTG CCC CCC GGC TAC TCC ATC AAG GTG TTC GAC TTC 1477

E R S G L Q H A P E P D A A D G P Y D P 461
GAG CGC TCG GGC CTG CAG CAC GCG CCC GAG CCC GAC GCC GCC GAC GGC CCC TAC GAC CCC 1537

N S V R I S F A K G W G P C Y S R Q F I 481
AAC AGC GTC GCG ATC AGC TTC GCC AAG GGC TGG GGG CCC TGC TAC TCC CGG CAG TTC ATC 1597

T S C P C W L E I L L N N P R * 497
ACC TCC TGC CCC TGC TGG CTG GAG ATC CTC CTC AAC AAC CCC AGA TAG 1645

TGGCGGCCCCGCGGGAGGGCGGGTGGGAGGCCGCGGCCACCGCCACCTGCCGGCCTCGAGAGGGGCCGATGCCCAGA 1724

GACACAGCCCCACGGACAAAACCCCCAGATATCATCTACCTAGATTTAATATAAAGTTTTATATATTATATGAAAAA 1803

AAAAAAAAAAAAAA 1817

FIG.10B